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Title: JTOT Health and Safety Considerations

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JTOT Health and Safety Considerations

General Overview



Please Note

- The purpose of this overview is to ***raise awareness*** of the health and safety issues facing JTOT responders
- It will ***not*** cover every potential hazard
- It will ***not*** recommend mitigating measures for every hazard
- It is the ***individuals responsibility*** to:
 - Review this presentation
 - Seek out additional information as required from appropriate program personnel
 - Program Management
 - Health and Safety skill set personnel
 - Be an active participant in safety during all JTOT operations



Agenda

- Introduction
- Physical Hazards
- Chemical Hazards
- Radiological Hazards
- Biological Hazards
- Environmental Hazards
- Summary
- H&S Orientation Verification





Introduction

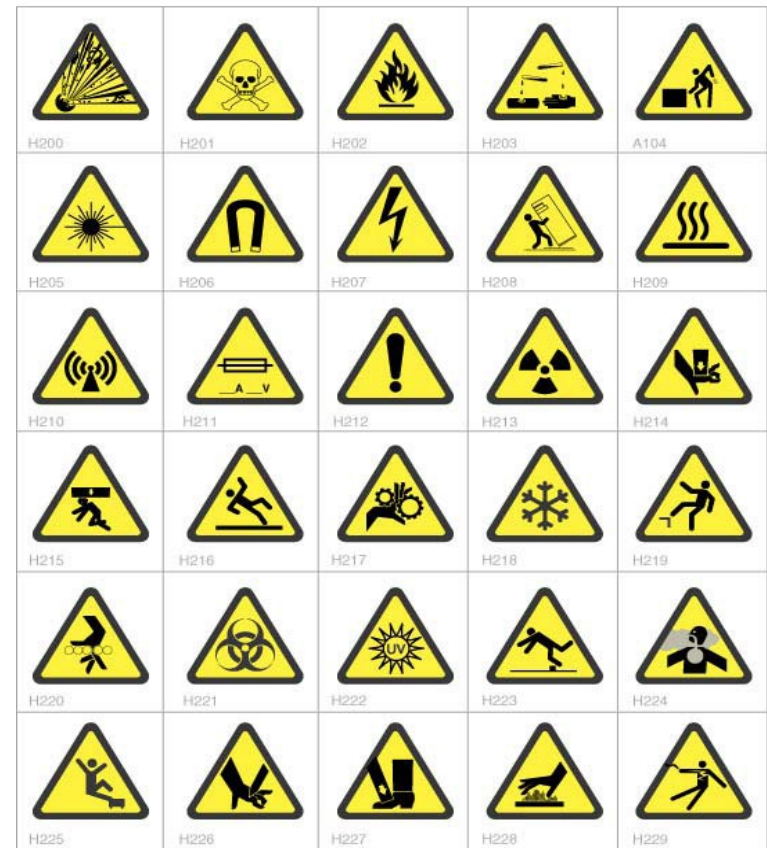
- JTOT field operations have many unique hazards
- Large operational leeway given
 - Necessary for successful mission completion
 - Great responsibility lies with the team and individual
- Maintain your first aid and CPR/AED certifications as required
- Federal Team Leader is ultimately responsible for team safety
- **YOU** are responsible for your own safety
 - Remember :

Look out for others..but assume no one is looking out for you!



Physical Hazards

- General Site Safety
 - Inadequate lighting
 - Elevated work surfaces
 - Slip/trips/falls/drops
 - Power tools
 - Confined spaces
 - Immediately Dangerous to Life/Health issues (IDLH)
 - Oxygen levels, etc.
- Electrical
 - High voltage lines
 - Generators
 - Power cords everywhere





Physical Hazards

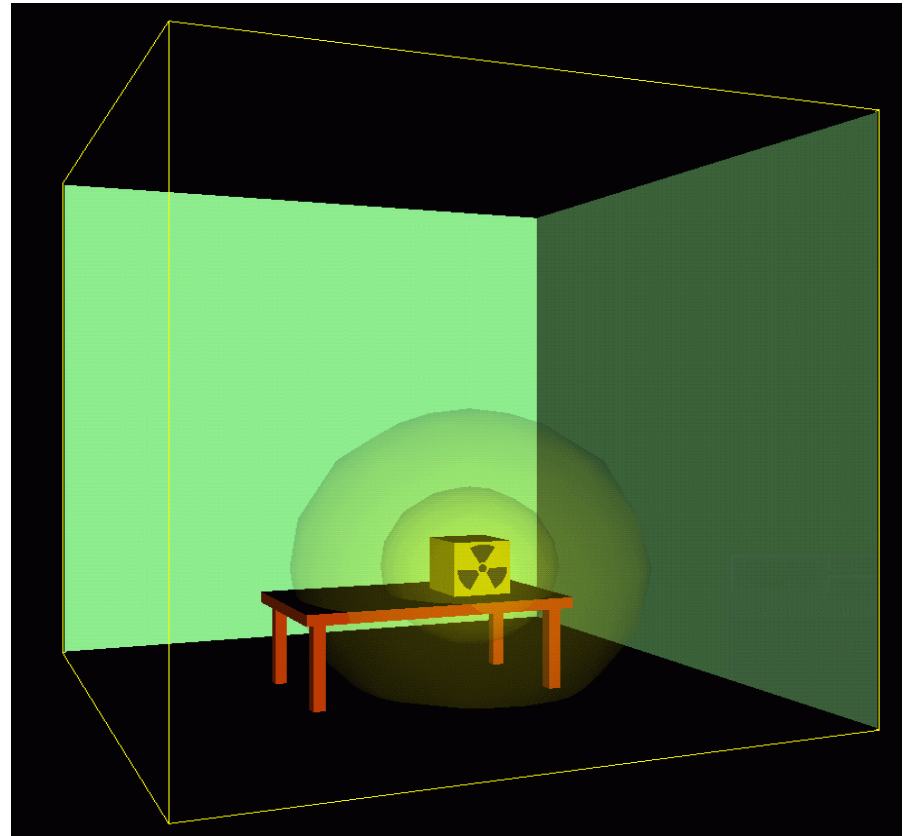
- Aviation
 - Follow instructions
 - Props
 - Jet intakes/exhausts
 - Rotor (helicopter) operations
 - Foreign Objects on Deck (FOD)
 - Don't leave any (hats, paper, etc)!
 - Long sleeves required on Military Aircraft
 - Wear your seat belt/restraints
 - Stow hats while on the flight line
 - Be careful loading/unloading equipment





Physical Hazards

- Device
 - Electrostatic discharge
 - General handling
 - Criticality
 - Potential electrical issues
 - Contamination
 - Thermal sources
 - Consult WE Workbook for a complete listing





Physical Hazards

- LAC
 - Handling/positioning
 - Watch where this is pointed
 - Assure dead-man is manned
 - Unintended consequences
 - Amputations/Embolisms/very nasty infections
 - Run-off containment
 - Potentially contaminated water (Rad/Chem)
 - Use appropriate control measures

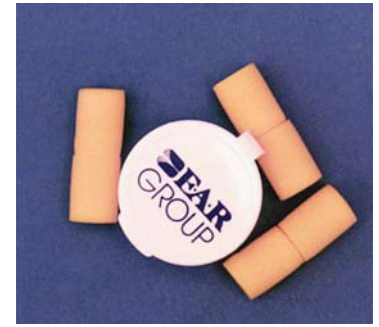




Physical Hazards

- Other

- Driving/Cell phones
- Weapons/disrupters
- Compressed gasses
- Pinch points
- Heavy lifts
- High noise levels
- Lifting equipment
 - Cranes
 - Forklifts
 - K-loaders
 - Lift gates





Chemical Hazards

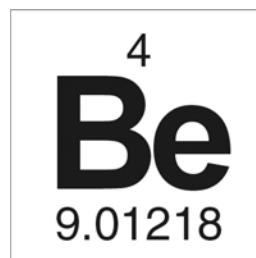
- Energetic Materials
 - General hazards
 - Compatibility issues
- Solvents
 - Exposure and flammability issues
- Reactive compounds
 - Certain materials are not compatible with water, etc
- Volatile Chemicals
 - Lower and upper explosive level issues (LEL/UEL)
- Oxygen displacement (cryogenics, CO)
 - Asphyxiation





Chemical Hazards

- Beryllium
 - Inhalation danger
- Heavy Metals
 - Heavy metal poisoning
- Generator exhaust (CO etc.)
 - Asphyxiation
- Pyrophoric materials
 - Fire
- Hydrogen isotopes
 - Fire
 - Uptake





Radiological Hazards

- External Radiation Levels
 - Gamma
 - Neutron
 - Beta
 - Machine Produced X-rays
 - TLD and follow procedures
- Contamination (fixed/loose)
 - Mainly an Alpha issue
 - Beta/gamma possible
 - Follow standard procedures
- Airborne Contamination
 - Keep shaved and respirator qualified if required





Radiological Hazards

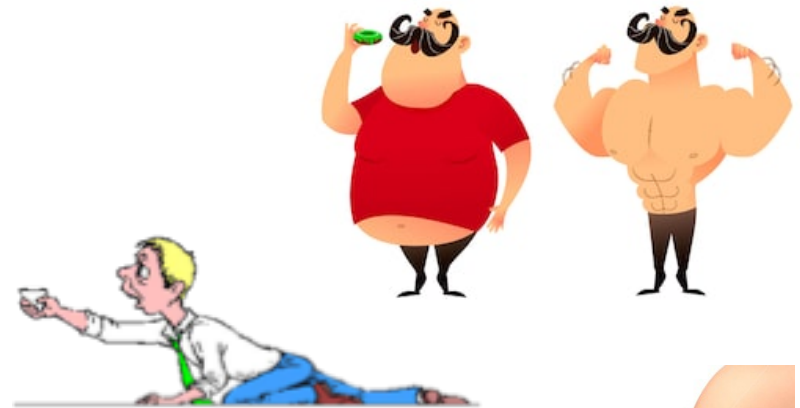
- Non-ionizing radiation
 - Electromagnetic fields (EMF), microwaves, etc.
 - Don't walk in front of an antenna!
 - Swedish
 - All over flight lines, boats, command/control posts, etc.





Biological Hazards

- Personnel Readiness
 - Physical Conditioning
 - You know what we are talking about here
 - Dehydration
 - Hydrate or die
 - Inoculations up to date
 - Personnel medications/glasses
 - It is up to you to bring sufficient quantities with you





Biological Hazards

- Personnel Readiness
 - Sleep deprivation
 - Cat nap when you can
 - Realize you are not totally up to snuff when tired. After 18 continuous hours performance reduced by >30%
 - After 42 continuous hours performance reduced by >60%
 - Sleep deprivation impaired driving is a real danger we face
- FTL/TTL may **REQUIRE** a rest period prior to returning home
- Reconstituted teams are formed for this very reason

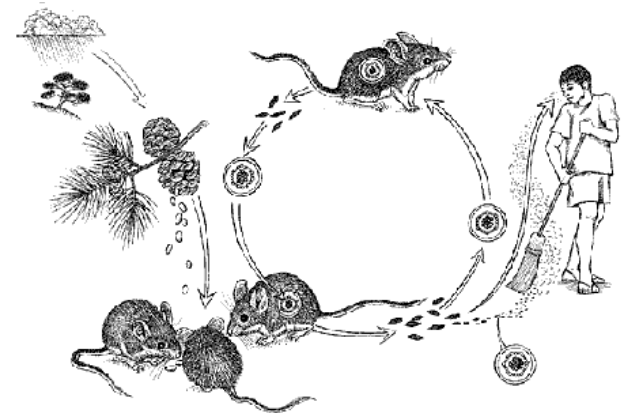




Biological Hazards

- Wildlife

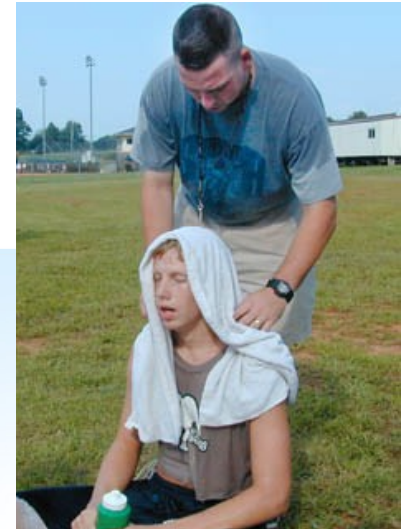
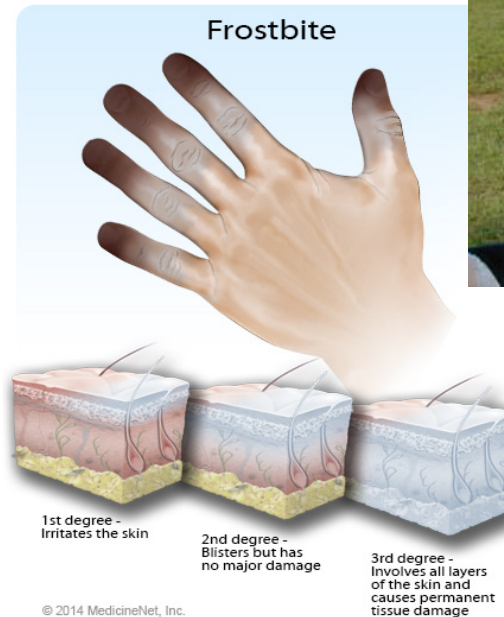
- Mosquitoes
 - West Nile virus
- Snakes
 - Exist in many of the areas we operate
- Spiders/other insects
 - Plague
- Rodents/droppings
 - Hantavirus
- Take appropriate precautions
 - DEET insecticides
 - Appropriate foot/leg wear
 - Housekeeping





Environmental Hazards

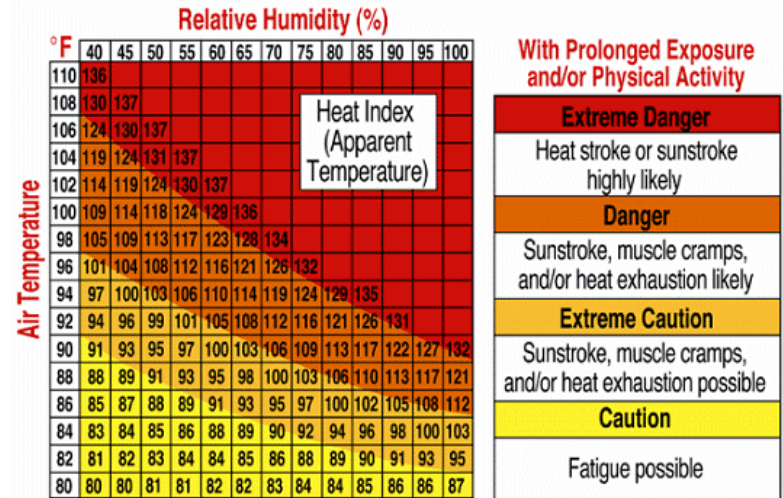
- Heat Stress
 - Heat exhaustion
 - Heat stroke
- Sun exposure
 - Wear your hat and sunscreen
 - Don't forget your cheap sunglasses
- Cold Stress
 - Hypothermia
 - Frostbite
- Lightning
- High Winds





Environmental Hazards

- Humidity
 - Increases heat index
 - Dehydration issues can occur
- Snow/Ice/Rain
 - Impacts driving
 - Slips!
 - Physiological impacts
- Bring all your gear to assure you have appropriate clothing, etc
 - You may be re-deployed to various climate extremes





Summary

- Be aware/alert to hazards
- Simple things can get you
 - Driving
 - Lifting
 - Pinch points
- Personnel Protective Equipment (PPE)
 - Gloves
 - Respirators
 - Eye protection
 - Boots/Long sleeve shirts/pants
 - Anti-C's





Summary

- First aid equipment available
- Automatic External Defibrillator available
- Assure any medications you require are with you
- Let your Technical Team Leader/Fed/Health & Safety team member know of any potential medical issues
 - Allergic to bee stings, etc.
- Fed should conduct a safety briefing prior to operations
 - *If not, ask for one!*
 - *Security should be covered too*
- Consider the safety implications of all operations





Summary

- Look out for yourself and others
 - Point out safety issues immediately
- Health and Safety personnel from other organizations may be on site
 - HMRU
 - Work with them
- Contact a Health & Safety skill set member if you have questions
 - *They will be glad to help*
 - *Don't forget that the Home Team Health & Safety expert can assist!*





To Receive Credit

- Send an email with the Subject:
Insert your name has completed the H&S Safety Orientation.
- Send to your ARMS Coordinator:
 - LANL – sap@lanl.gov, lorraineo@lanl.gov
 - LLNL – siegel5@llnl.gov
 - Sandia – edsanch@sandia.gov, habaile@sandia.gov
 - Pantex – theflev@pantex.com